

Attorney Docket No. 509/35644D
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Michael J. Hawthorne *et al.* Confirmation No. 8600
Serial No.: 10/656,253 Art Unit: 2128
Filed: September 8, 2003 Examiner: LUU, Cucong V.
For: **METHOD OF TRANSFERRING FILES AND ANALYSIS OF TRAIN
OPERATIONAL DATA**

AMENDMENT

Mail Stop Amendments
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the official Patent Office action dated June 7, 2006, Applicants request reconsideration of the rejections. Claims 1, 2, 5-7 and 10-14 were rejected as anticipated under 35 U.S.C. 103 by Mosier U.S. Patent 4,041,283. Claims 3, 8, 9 and 15 were further rejected under 35 U.S.C. 103 as being obvious over Mosier by itself or in combination with Lynch *et al.*, Matheson and Herzberg *et al.*.

The error noted by the Examiner in Claim 10 has been corrected and is shown on the attached Claim Summary.

Independent Claim 1 is directed to a method of adjusting a simulator comprising inputting data from the train into the simulator and operating the simulator with the data. The next step is adjusting automatically the parameters of the simulator until the data of the simulator matches the data from the train.

Independent Claim 10 is a method for fine-tuning of a train dynamic model. The method includes inputting real time, measured train data from the train into the processor and running the train dynamic model with the initial parameters to produce modeled train data. Next the model train data and the measured train data are compared and the train parameters for the model are automatically adjusted until the modeled train data matches the measured train data.

Applicant agrees with the rejection that Mosier does show inputting data from the train into the simulator and operating the simulator with the data. What it does not show is automatically adjusting the parameters of the simulator until the data of the simulator matches the data from the train. Column 17, lines 33-41 of Mosier does not meet this claim limitation. It specifically states:

[U]sing the data as to the length of each car in the train and location of the head of the train, the grade and curve values are determined for each car from the track profile data for use in resistance calculations. The rolling resistance calculations for a car R_{Rn} may be performed from the car data, train velocity, grade and curve values by using a modified Davis train resistance equation as previously discussed in the Mathematical Model section, note equation (2).

What this section says is that the grade and curve values are determined for each car from the track profile data. In order to do this one must determine from the data the length of each car in the train and the location of the head end. This locates the cars with specific grade and curve values. This is not automatically adjusting parameters of the simulator until the simulator matches the data from the train. This is merely matching the location of each car with grade and curve values.

The next sentence merely describes that rolling resistance is calculated based on the car data, train velocity, grade and curve values. The calculation of this resistance is not “automatically adjusting parameters of the simulator until the data of the simulator matches the data of the train.” There is no measured rolling resistance and thus there can be no comparison of the calculated rolling resistance to the actual rolling resistance and modification of parameters of the simulator until this calculation matches the actual measured data. Thus Mosier cannot anticipate nor is it obvious to modify Mosier to meet the limitation of Claim 1.

As discussed above, Claim 10 is even more specific that this is fine-tuning of a model. As with respect to Claim 1, Mosier does not discuss fine-tuning of a model by running the dynamic model and comparing the results of the model train data with the measured train data. Thus Mosier cannot anticipate nor would it be obvious to modify to meet the limitation of Claim 10.

With respect to the Lynch *et al.* patent, the note in Column 7, lines 47-54 merely discusses the onboard computer of the train which computes real time speed, rate of change of speed and distance traveled data, and transfers to memory with the real time data so that the history of the information is compiled for real time and collected data to be analyzed later. This

is the initial input to the simulator and does not improve the teachings of Mosier with respect to automatically adjusting or fine-tuning the parameters of the simulator.

With respect to the Matheson patent, the area noted on Column 8, lines 32-35 has to do with exceptions to scheduling and has nothing to do with comparing real time operational data of the train in a simulator. Thus it is not obvious to combine it with Mosier nor would they produce the results of Claim 4.

It should be noted the dependent claims are allowable for their own independent limitations, as well as the limitations of independent Claims 1 and 10. All the claims are considered allowable over the art of record and thus the passage of this case to issue is respectfully solicited.

It is respectfully requested that, if necessary to effect a timely response, this paper be considered as a Petition for an Extension of Time sufficient to effect a timely response and shortages in other fees be charged, or any overpayment in fees be credited, to the Barnes & Thornburg LLP Deposit Account No. 02-1010 (509/35644).

Respectfully submitted,

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